PHED COMMITTEE #1
February 27, 2017
Worksession

MEMORANDUM

February 23, 2017

TO: Planning, Housing, and Economic Development Committee

FROM: Glenn Orlin, Deputy Council Administrator GO

SUBJECT: **Worksession**—Bethesda Downtown Sector Plan—land use/transportation balance; transportation elements

Councilmembers: Please bring the Draft Plan and Appendix to this worksession.

I. LAND USE/TRANSPORTATION BALANCE AND STAGING

Every master plan should have a balance between its proposed land use and its proposed transportation network and services. For a quarter century this "balance" has been defined as what would be needed to meet the current adequate public facilities requirements as described in the Subdivision Staging Policy (SSP), formerly called the Growth Policy. Achieving this balance in a plan is not an academic exercise: if a plan is not balanced, then at some point in the future a proposed master-planned development would be unable to proceed because it would have no means to meet the adequate public facility requirements.

a. Intersections. According to the newly adopted 2016-2020 SSP, the congestion standard for signalized intersections in the Bethesda CBD Policy Area is a volume/capacity ratio of 1.13 (using the Highway Capacity Manual method), which translates to an average vehicle delay of 120 seconds/vehicle. The standard for such intersections outside the Bethesda CBD—but inside the Bethesda/Chevy Chase Policy Area—is a volume/capacity ratio of 1.00, translating to an average vehicle delay of 80 seconds/vehicle. For determining sector plan balance, the analysis typically forecasts the delays at intersections both inside and outside the plan boundary; indeed, usually if there is future congestion it is to be found not so much within the boundary, where there are a grid of streets through which traffic can be spread out, but at the few "gateway" intersections through which traffic entering, leaving, or merely passing through the sector plan must funnel.

The following chart displays the results of the Planning staff's analysis of the peak-hour delays forecasted at major signalized intersections under the 2040 Vision Plan, including those intersections for which improvements are assumed. The delays that exceed the standard are **bolded**:

Intersection Delay (seconds/vehicle) calculated by Planning staff

Intersection	*SSP Standard*	*AM Peak*	*PM Peak*
Battery Lane/Wisconsin Avenue	120	17.8	19.5
Elm Street/Wisconsin Avenue	120	10.6	24.8
Bradley Boulevard/Wisconsin Avenue	120	63.5	74.4
East-West Highway/Wisconsin Avenue	120	39.6	67.2
Montgomery Avenue/Wisconsin Avenue	120	14.9	23.6
Bethesda Avenue/Arlington Road	120	74.1	117.2
Leland Street/Wisconsin Avenue	120	13.5	61.7
Wilson Lane/Old Georgetown Road	120	46.5	59.8
East-West Highway/Connecticut Avenue	80	71.8	**128.5**
Bradley Lane/Connecticut Avenue	80	34.7	**174.9**
West Cedar Lane/Old Georgetown Road	80	35.5	35.9
Cedar Lane/Rockville Pike	80	64.7	55.0
Jones Bridge Road/Rockville Pike	80	36.4	41.5
Huntington Parkway/Bradley Boulevard	80	34.5	44.3

Planning staff's analysis was based on 90% of the theoretical buildout of about 32.4 million square feet (sf), or about 29.1 million sf in total; they note that theoretical buildout is rarely attained. Of this amount, 23.6 million sf exists, with new development—some of which has already received subdivision approval—comprising the 8.8 million sf difference. Therefore, the Planning staff's modeling assumes that only 5.5 million sf (five-eighths) of the 8.8 million will be realized. This is an important point in the discussion about staging, below.

The Town of Chevy Chase, in association with the Coalition of Bethesda Area Residents (CBAR), contracted with Dr. Lei Zhang, Director of the University of Maryland's National Transportation Center, to perform an independent analysis of future traffic conditions in the Bethesda area. Dr. Zhang's analysis examined four scenarios: "2016 Base Case" (a modelling of current conditions); "2040 No Build" (2040 traffic with no additional development approved); "2040 Built Out" (2040 traffic with the buildout of the development and transportation facilities in the sector plan, including the assumed higher non-auto-driver mode share), and "2040 Business as Usual" (2040 traffic with buildout of the development but without a higher mode share). Some of the results of his study are on ©1-2. His conclusions are:

- There will be significant traffic growth in the study area between 2016 and 2040. The increase in background traffic alone will significantly worsen congestion in Bethesda.
- The proposed developments in the Downtown Bethesda Vision 2040 Plan will add additional trips, which will further worsen congestion along MD 355 and other major arterial streets (e.g., MD 185, MD 187, MD 191, and MD 410).
- The local and regional traffic impact is very sensitive to non-auto-driver mode share (NADMS) assumptions.

Since the measure the Council uses for determining land use/transportation balance is the SSP standard, Council staff requested the Town to ask Dr. Zhang to calculate the intersection delay in the peak hour under his "2040 Built Out" scenario for the most congested intersections. His

analysis examined only the PM peak hour, but that is sufficient, since in this area the PM peak is worse of the two. His results are as follows; the delays that exceed the standard are **bolded**:

Intersection Delay (seconds/vehicle) calculated by Dr. Zhang

Intersection	***SSP Standard***	***PM Peak***
Bradley Boulevard/Wisconsin Avenue	120	67
East-West Highway/Connecticut Avenue	80	**114**
Bradley Lane/Connecticut Avenue	80	61
Cedar Lane/Rockville Pike	80	80
Jones Bridge Road/Rockville Pike	80	**112**

Each intersection which fails under one or both analyses is discussed below:

Jones Bridge Road/Rockville Pike. Five months ago the State Highway Administration (SHA) revised the signal configuration during the PM peak, so that there are now two left-turn lanes from southbound Rockville Pike to eastbound Jones Bridge Road; the southbound through movement was reduced from two lanes to one (plus retaining the combination through/right-turn lane). This change was not incorporated in Dr. Zhang's analysis; he has agreed to recalculate his result, hopefully in time for the worksession.

Bradley Lane/Connecticut Avenue. The Planning staff's Synchro result for the PM peak hour is extremely out of sync with its initial critical lane volume (CLV) analysis. Its CLV forecast was 1,623 in the morning peak and 1,635 in the evening peak: both barely in the Level of Service (LOS) F range. Its Synchro results, however, are extremely different: 34.7 seconds/vehicle (LOS C) in the morning peak, and 174.9 seconds/vehicle (very deep into LOS F) in the evening peak. Planning staff has noted that, in this case, they believe that the CLV analysis describes the more accurate outcome. Dr. Zhang's analysis more or less confirms the Planning staff's conclusion: he calculates the PM peak hour delay to be 61 seconds/vehicle (LOS E).

Planning staff tested an alternative that would add an exclusive right-turn lane on both the east and west legs of Bradley Lane. This would reduce the forecasted CLV to 1,484 in the morning peak and 1,485 in the evening peak, well within the old CLV standard. Adding a lane would require an additional 11'-wide strip in the southwest quadrant from the Chevy Chase Club, and in the northeast quadrant in front of two homes. **An exclusive right-turn lane on eastbound and on westbound Bradley Lane at Connecticut Avenue should be included in the plan.**

Cedar Lane/Rockville Pike. This intersection passes the SSP standard according to the Planning staff's analysis, and it passes—but is on the verge of failing—in Dr. Zhang's analysis. However, the 1990 Bethesda Chevy-Chase Master Plan calls for an eventual grade-separated interchange at this location. Council staff requested Planning staff to examine the feasibility of an interchange there.

The most likely scenario would be to construct a two-lane overpass on Rockville Pike between Locust Hill Road/Cedar Croft Drive to the north, and Wood Drive (the north entrance to Walter Reed) to the south. The through movements on Cedar Lane and the turning movements between Rockville Pike and Cedar Lane would continue to occur at grade. Planning staff believes

the overpass can be constructed without having to further widen Rockville Pike in this area. The two-lane overpass could operate either as one lane in each direction or as a two-lane reversible roadway. Depending on the ultimate design of the MD 355 BRT, it, too, could use the overpass as a means of bypassing this choke point.

The Bethesda Downtown Plan does not take this interchange out of the plan, but there is no explicit mention of it. **This overpass should be explicitly included in the plan.**

East-West Highway/Connecticut Avenue. This intersection fails under both analyses, even with the improvement included from the Chevy Chase Lake Sector Plan: adding a third eastbound-to-northbound left-turn lane, and changing the lane assignments for southbound Connecticut Avenue between the AM and PM peak. This improvement—which could be accomplished mostly within the existing curb lines—would allow the intersection to meet the standard in the AM peak, and the PM peak would improve from 151.4 seconds/vehicle to 128.5 seconds/vehicle, but this is still far worse than the 80 seconds/vehicle standard.

Planning staff evaluated an alternative improvement: adding a through lane in each direction on Connecticut Avenue—widening its cross-section from seven to nine lanes—and adding an exclusive right-turn lane from westbound East-West Highway to northbound Connecticut Avenue. Under this alternative the nine-lane cross-section would likely extend from Club Drive to south of Blackthorn Street. This alternative would bring the forecasted PM peak-hour delay to 92.5 seconds/vehicle: much better, but still not meeting the standard. However, it would require reducing the frontage on each side of Connecticut Avenue—both north and south of East-West Highway—by 10-11 feet.[1] **This alternative improvement should be explicitly included in the plan.**

b. Non-auto-driver mode share (NADMS). NADMS is expressed in two ways: the mode share of Bethesda residents (NADMS-R) and of Bethesda employees (NADMS-E). According to the latest American Community Survey, the NADMS-R is about 51%. According to annual surveys by Bethesda Transportation Solutions (Bethesda's transportation management organization), the NADMS-E has averaged about 37% recently; the last survey estimated it to be 38%.[2] The Draft Plan recommends that 50% be the goal for both NADMS-R and NADMS-E.

The traffic forecasting model projected NADMS based on the type of land use and transit facilities included in the Vision Plan. It forecasted a NADMS-R of 54% and a NADMS-E of 43%. The traffic forecasts noted above assume these mode shares are achieved. CBAR and others believe that these goals should be set much higher. Indeed, if White Flint has NADMS-R and NADMS-E goals of 51% and 50%, respectively, the goals should be higher in Bethesda. This is not only because of the presence of the Purple Line, but because Bethesda—due to its closer-in location—will always have more transit accessibility than White Flint: a higher proportion of transit accessible housing and jobs will be within a 30-45-minute commute.

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[1] Decades ago SHA investigated building a potential grade-separated interchange at this location, but its cost and impacts were much too dear to merit further consideration. Former CBS news anchor (and Chevy Chase resident) Eric Sevareid helped to lead the opposition to it.

[2] The Final Draft Plan states that the NADMS-E is currently 42%, but Council staff has found no documentation of that in the supporting materials.

An achievable set of goals would be 60% for NADMS-R and 52% for NADMS-E. These levels can be reached with the opening of the Purple Line, the MD 355 BRT, an expanded Circulator and other local bus services, a robust bikeway network, a more restrained parking supply policy, higher public parking fees (especially for long-term parking), and a more substantial transportation demand management program that markets significant fare discounts and other incentives to rideshare.

*c. **Staging.*** Given the importance of meeting the mode share goals, the 8.8 million sf of yet unbuilt development under the cap should be staged as interim goals are met. Recall earlier that only 5.5 million sf of this development was modeled, so the intersection delay findings assume only 5.5 million sf. To absorb the final 3.3 million sf, the higher mode share recommended above would have to be achieved. Therefore, the following staging is recommended:

Of the 8.8 million sf yet to be built under the cap:

- **Stage 1: 2.5 million sf could proceed without meeting any added staging requirement**
- **Stage 2: 3.0 million sf, but it would proceed only after Bethesda achieves an NADMS-R of 54% and an NADMS-E of 43% in two successive years**
- **Stage 3: 3.3 million sf, but it would proceed only after Bethesda achieves an NADMS-R of 60% and an NADMS-E of 52% in two successive years**

All new development, of course, would also have to meet the transportation and school adequacy tests in the SSP.

II. OTHER TRANSPORTATION ELEMENTS

The remainder of this memorandum addresses those transportation elements in the Draft Plan that, taken individually, will not materially affect the balance between land use and transportation at buildout. The issues raised here are those that have been raised by the public testimony and correspondence, comments from the Department of Transportation (DOT), or by Council staff. The Draft Plan's transportation discussion and recommendations are on pp. 34-59, and in Appendix E.

*1. **Street classifications, connections, and abandonments.*** The County Code describes street classification types, and master and sector plans set the classification for each street. Below are the classification types that pertain to the Bethesda Downtown Plan:

> A *Major Highway* is a road meant nearly exclusively for through movement of vehicles at a moderate speed. Access must be primarily from grade-separated interchanges and at-grade intersections with public roads, although driveway access is acceptable in urban and denser suburban settings.
>
> An *Arterial* is a road meant primarily for through movement of vehicles at a moderate speed, although some access to abutting property is expected.
>
> A *Minor Arterial* is a two-lane Arterial meant nearly equally for through movement of vehicles and access to abutting property.

A *Business District Street* is a road meant for circulation in commercial and mixed-use zones.

A *Primary Residential Street* is a road meant primarily for circulation in residential zones, although some through traffic is expected.

A *Secondary Residential Street* is a road meant to provide access between a residential development with fewer than 200 dwelling units and one or more higher classification roads.

Figure 2.08 (p. 37) displays the proposed classifications, and Table 2.01 (pp. 38-39) shows each street's classification, minimum right-of-way, and number of through lanes; these appear in all plans. The table typically lists all roadways down to the primary residential street level; streets of a lower classification (secondary and tertiary residential streets) are not listed. However, Table 2.01 does not list the plan's primary residential streets. **Include primary residential streets in Table 2.01.**

a. Pearl District. The Draft Plan calls for a new two-lane business district street in a 60'-wide right-of-way for the block between East-West Highway and Montgomery Avenue, about 400' east of Pearl Street (B-1). It is only recommended if the property at 4350 East-West Highway is redeveloped. The connection would break up this extremely long superblock and provide much better vehicle and pedestrian circulation. **Concur with the Draft Plan regarding B-1.**

ProMark has proposed the potential abandonment of Pearl Street between Montgomery Avenue and the Capital Crescent Trail (CCT) (©3-6). Currently this short block is used as access from the Bethesda Sport and Health Club and the Air Rights complex, and as an informal access to the Georgetown Branch Interim Trail; the Purple Line design plans call for a formal access point there to the Capital Crescent Trail. **The Plan should anticipate the abandonment of this block of Pearl Street, as long as there is sufficient width for a pedestrian/bicycle access between the CCT and Montgomery Avenue, and that access for the abutting private properties is provided.**

b. South Bethesda District. This is the residential district south of Bethesda Avenue, east of the Capital Crescent Trail, and west of the businesses fronting Wisconsin Avenue. The Draft Plan recommends reclassifying Leland Street between Woodmont Avenue and Bradley Boulevard as a minor arterial, in that it serves nearly equally the purposes of carrying traffic between these two points and as well as access for the homes on that block. However, an even stronger case can be made for reclassifying Hillandale Road—Leland Street's continuation south to the plan boundary and beyond to Little Falls Parkway—as a minor arterial. Hillandale Road has become a significant means of access to Bethesda from Westbard (via Little Falls Parkway), especially for commuters seeking to avoid the congestion on Arlington Road. **Concur with the Draft Plan to reclassify Leland Street south of Woodmont Avenue as a minor arterial, and also reclassify Hillandale Road as a minor arterial.**

Strathmore Street runs north-south between Woodmont Avenue and Bradley Boulevard and is flanked by garden apartments and townhouses. **If those land uses are to remain in the adopted Bethesda Downtown Plan, then the recommended primary residential street classification is correct.** However, before the Council are proposals to redevelop the homes on

the east side into a higher intensity mix of residential and commercial uses. **Depending upon the Council's ultimate land use decision here, Strathmore Street between Woodmont Avenue and Bradley Boulevard may be more appropriately classified as a business district street.**

Chevy Chase Drive, Offutt Lane, and Wellington Drive are all narrow streets that will never serve a purpose other than accessing the homes along them. **These three streets should all be reclassified from primary residential streets to secondary residential streets.**

The Draft Plan calls for an extension of Strathmore Street across Bradley Boulevard to Chevy Chase Drive as a business district street (B-2). The street would bisect the superblock of apartment buildings (owned by the Housing Opportunities Commission and the Chevy Chase Development Corporation) now framed by Bradley Boulevard, Chevy Chase Drive, and Offutt Lane. The Planning Board's objective is to provide more direct walk and vehicle access to Norwood Park from the southern portion of Bethesda. CBAR and the Singelmanns (members of the Chevy Chase Drive Condominium Association) oppose this vehicular connection, not wanting to further encourage auto traffic within their neighborhood; the residents, however, do support pedestrian-bicycle access there (©7-9).

Council staff concurs that a vehicular street through this property is not needed (or necessarily desirable) to reach Norwood Park, but it may be nevertheless desirable to provide better access within a redevelopment there; whether there is a new street extension of Strathmore Street south to Chevy Chase Drive should be a function of whatever site plan is ultimately approved for that property, should it redevelop. **However, if access to the redeveloped site requires such a street connection, it should also be as a secondary residential street like Chevy Chase Drive and Offutt Lane, and *not* as a business district street. At the very least, a pedestrian/bike connection between Bradley Boulevard and Chevy Chase Drive should break up this superblock.**

c. Battery Lane. Battery Lane is a currently classified as a primary residential street. However its function is more evenly split as (1) a collector street from the neighborhoods along it, and (2) a through connection between Old Georgetown Road on the west and Woodmont and Wisconsin Avenues on the east. **It is more appropriately classified as a minor arterial, like the western portion of Leland Street and Hillandale Road.**

d. Hampden Lane. National Real Estate Advisors, Washington Property Company and the Chevy Chase Land Company have assembled properties along the west side of Wisconsin Avenue between Montgomery Avenue and Elm Street. The assemblage—which was one of the finalists for the Marriott relocation—is currently bisected by Hampden Lane. Part of its plan is to abandon Hampden Lane between East Lane and Wisconsin Avenue and use it as part of the redevelopment (©10-15).

Access from/to Wisconsin Avenue is currently only right in/right out: there currently is no median break on Wisconsin Avenue, and its close proximity to the Wisconsin Avenue/Elm Street intersection precludes it from ever having a median break. The property owners' traffic consultant, working with Planning staff, performed an analysis of the potential closure, and it found that the nearby major intersections—Wisconsin Avenue/East-West Highway and Wisconsin

Avenue/Montgomery Avenue—would operate satisfactorily, whether the one-way pair was retained or not (©16-20). Given this analysis, **the plan should recognize that Hampden Lane could be abandoned between Wisconsin Avenue and East Lane, with the caveat that a sufficiently generous easement be retained for pedestrian and bicycle access between Wisconsin Avenue and East Lane.**

e. Arlington Road realignment. The 1994 plan called for straightening out the curve on Arlington Road between Bethesda Avenue and Bradley Boulevard to provide for a better sight distance. Apparently this recommendation was retained in the draft plan at the request of DOT, but since a traffic signal was installed at the entrance to the Bradley Hills Shopping Center, DOT no longer believes it to be necessary. **This recommendation should be deleted from the plan.**

f. Woodmont/Bethesda Avenue intersection. The plan recommends reconfiguring this intersection to shorten the crossing distance for pedestrians and bikers, especially considering the Capital Crescent Trail crossing and the establishment of a future public plaza on the northeast corner. DOT believes this has already been accomplished by the recent reconstruction auxiliary to the relocation of Woodmont Avenue and the construction of Garage 31.

A further narrowing of the roadways may not be possible given the acute angle at which Woodmont and Bethesda Avenues cross. However, this may be just the location for implementing a "pedestrian scramble", or "Barnes Dance": an intersection where, built into the signal cycle, is a phase where all four of the road approaches are red, and pedestrians and bikers can cross anywhere they like, including from one corner to another diametrically opposite (©21-28). A classic Barnes Dance would halt all ped crossings except during the "dance" phase, but this might be too constraining. Alternatively, an orthogonal ped crossing—that is, the typical crossing of one leg of an intersection at a time—might still be allowed when vehicular traffic on the crossing street has a green phase.

The plan should encourage the exploration of such a pedestrian scramble at this intersection during peak pedestrian times, especially on weekends when traffic congestion is less of a concern. This decision is entirely the County's to make (both Woodmont and Bethesda Avenues are county streets), and vehicular capacity is not a pressing issue, especially on weekends when ped/bike volumes at this location are at their highest.

g. Target speeds. Most recent sector plans have established target speeds for the streets and roads. Target speeds are those that are achieved when their final configuration of the road—and their traffic controls—are implemented. Setting target speeds is important, because while master plans cannot dictate specific traffic operations, they become the goal which the State Highway Administration and the County DOT are charged with achieving as the area develops.

Set the target speed for all classified streets in the Bethesda CBD (from major highways through primary residential streets) at 25 mph. As it happens most streets in Bethesda are already posted at 25 mph.

2. Circulator. The Plan calls for the geographic area covered by the Circulator to be expanded north from Auburn Avenue/Rugby Avenue to Battery Lane and south from Bethesda

Avenue to Bradley Lane (these changes were made in January 2016), and to the east into the Pearl District. CBAR recommends adding stops along Wisconsin Avenue north of East-West Highway, and that the Circulator run in both clockwise and counterclockwise directions. The Bethesda Chamber recommends extending the Circulator north to serve the Medical Center Metro Station.

DOT objects to a detailed identification of expanded routes and specific stops in the sector plan. It believes that decisions regarding its route, stops, and schedules should be left to the operator (currently, the Bethesda Urban Partnership), which it can adjust as demand—and budget—allows. For the sector plan DOT suggests instead that it highlight areas that should be served, noting that more than one circulator route may be more efficient.

DOT is correct that a land use plan is not the place to identify the specifics of an operating program like the Circulator. However, DOT will need to know enough of the specifics so it can cost out the number of additional Circulator buses needed as part of the future Bethesda Unified Mobility Program (BUMP). **While the route(s) and stops should not be specified in the plan, it should assume that the Circulator route(s) will ultimately be extended east to serve the new Metro/Purple Line station on Elm Street, the Pearl District, and the Medical Center Metro Station.**

*3. **Bikeways.*** The plan supplements the bikeway recommendations in 1994 plan in several key ways:

- Separated bike lanes (i.e., cycle tracks) along the full length of Woodmont Avenue;
- Separated bike lanes on Bradley Boulevard east to Wisconsin Avenue;
- Separated bike lanes on Bethesda Avenue/Willow Lane between Woodmont Avenue and 47th Street (this is the surface route for the CCT);
- Bike lanes on Arlington Road between Old Georgetown Road and Bradley Boulevard;
- Bike lanes on Elm Street between Arlington Road and the new south Metro entrance/Purple Line station;
- Bike lanes on Norfolk Avenue/Cheltenham Drive from Rugby Avenue to Wisconsin Avenue; and
- Extension of the Battery Lane bike lanes east to Wisconsin Avenue and west to Old Georgetown Road.

Some of these proposals would require "road diets" that would remove parking lanes and turning lanes. In some locations repurposing these parts of the roadway will still allow for sufficient capacity and on-street parking, but not in others. **The plan should note that any section of bikeway that would comprehend a road diet will require a more detailed interagency operational analysis before it is implemented.**

The east-west one-way pair comprising of East-West Highway/Old Georgetown Road (westbound) and Montgomery Avenue (eastbound) also have sufficiently high volume and potential speed (although they are posted at 25 mph) that they, too, should be designated for separated bike lanes.

Some additional suggestions have come forward since the Draft Plan was published. One idea that emerged from Councilmember Riemer's forum on bikeway improvements to the plan is to establish separated bike lanes on Edgemoor Lane between Arlington Road and the Bethesda Metro Station. In addition, CBAR recommends extending the planned bike lanes on Cheltenham Drive east from Wisconsin Avenue to Tilbury Street and establishing bike lanes on Pearl Street between Sleaford Road and East-West Highway, running between B-CC HS and Our Lady of Lourdes School. Chelton Road between East-West Highway and Sleaford Road, running along the east side of B-CC HS, also merits bike lanes. **Bike lanes in all these locations should be included in the plan; the speed and/or volume of vehicular traffic warrants some bike-vehicle separation, and there is sufficient room within the existing curbs for all of them.**

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Regional Traffic Impact Summary

Performance Measures	2016 Base	2040 No Build	2040 Built Out	2040 Business as Usual
Additional Auto Trips Generated in Bethesda CBD w.r.t 2016 Base	0 (Base)	5,681	9,992	12,535
Total Auto Trips in the Entire Study Area	188,572	207,924	212,235	214,778
Total Travel Delay (hour)	16,169	19,301	24,669	30,526
Average Speed (mile/hour)	23.6	19.8	19.6	16.2
Average Travel Time (minute/Trip)	9.6	10.4	11.8	13.3

MD 355 Wisconsin Avenue Travel Speed

Speed (mile/hour)	PM Peak Period (4pm~7pm)			
Scenarios	2016 Base	2040 No Build	2040 Built Out	2040 Business as Usual
MD 355 Northbound	14.5	12.7	11.8	10.5
MD 355 Southbound	20.2	15.8	13.5	12.4

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December 30, 2016

BY ELECTRONIC MAIL

The Honorable Nancy Floreen, Chair
Planning, Housing and Economic
Development Committee
Montgomery County Council
100 Maryland Avenue
Rockville, Maryland 20850

Re: Bethesda Sector Plan – Recommendations for Portion of Pearl Street

Dear Councilmembers Floreen, Leventhal and Reimer:

On behalf of Promark Real Estate Services, Inc. and its affiliates ("Promark"), we ask that you consider including the following recommendation in the Bethesda Downtown Plan (the "Sector Plan") to provide for the potential abandonment of that portion of Pearl Street located to the south of Montgomery Avenue.

Page 115, add new bullet under 2. Recommendations: b. Zoning, to read:

- Support the abandonment of that portion of Pearl Street located south of Montgomery Avenue to allow for the establishment of a private street promoting pedestrian viability and providing public access to the Capital Crescent Trail.

Promark owns property on both the east and west side of Pearl Street south of Montgomery Avenue and they have actively participated in developing the concept of the Pearl Street District, including the creation of a "main street" along Pearl Street which would connect to the Capital Crescent Trail ("CCT"). Note that the Pearl Street district and the main street concept are incorporated into the Sector Plan at pages 114-119. Representatives of Promark and Park and Planning Staff recently met to discuss a number of development options for this portion of Pearl Street, which would further the objectives of the Sector Plan, including activating Pearl Street and providing a meaningful connection to the CCT. As indicated by the attached photos and tax map, the subject portion of Pearl Street is less than 250 feet long, dead ends at the CCT, and functions primarily as a driveway. It was recognized during the discussion with Staff that the objectives of the Sector Plan could be more easily achieved, and may in fact be enhanced, if Pearl Street were abandoned and developed as a private street. The private street would allow

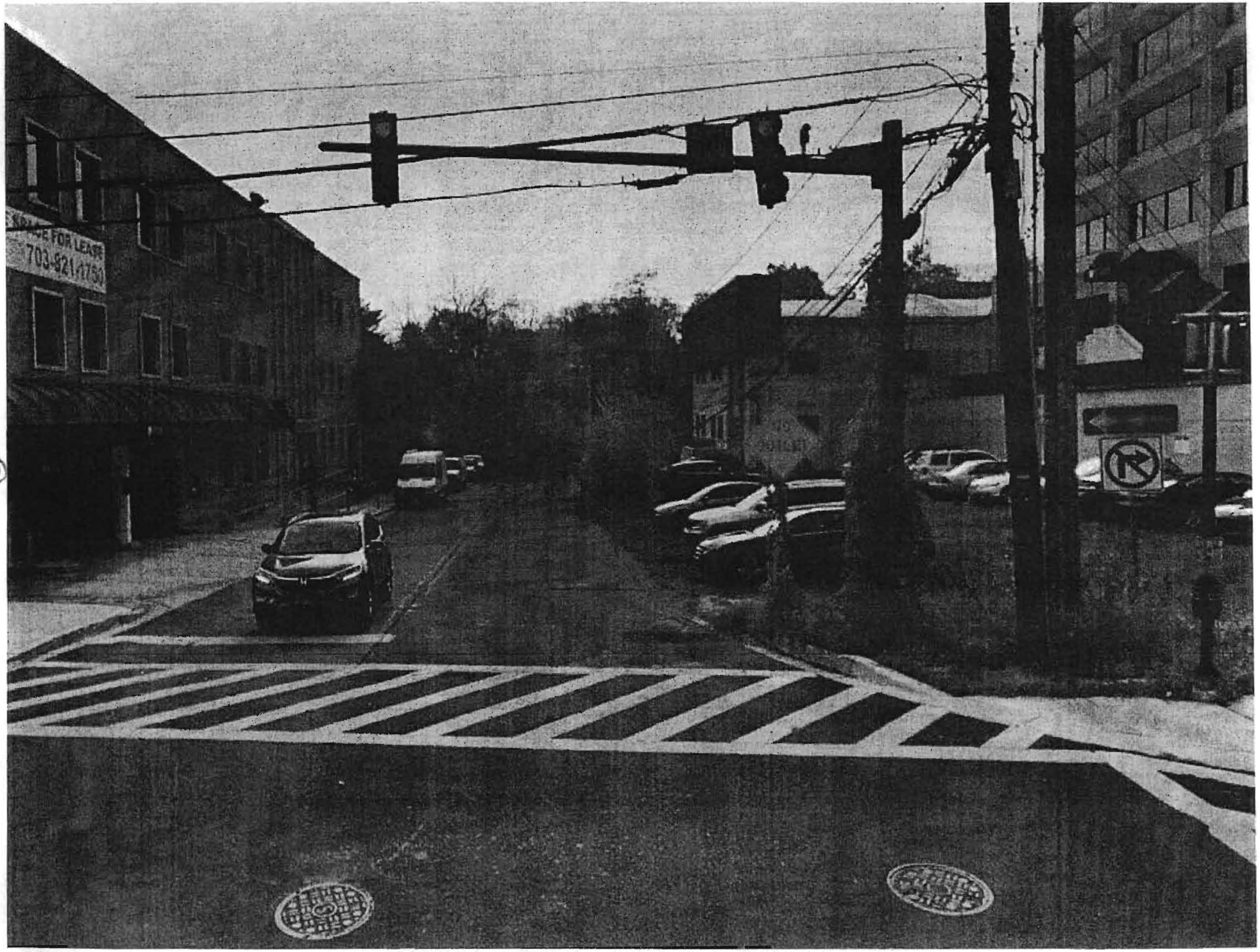
for nonstandard sidewalk and street paving widths and nonstandard improvements, and would permit particular uses not otherwise permitted in a right-of-way. It is anticipated that along this portion of Pearl Street, the pedestrian activity will take precedence over vehicular activity. Allowing the street to be abandoned and converted to a private street will promote this objective. Accordingly, we request that the Sector Plan include language supporting the potential future abandonment of this portion of Pearl Street.

We appreciate your consideration of this request and will contact you to follow up on this request.

Very truly yours,

Patricia A. Harris

Enclosures
cc: Councilmember Roger Berliner
Ms. Marlene Michaelson
Mr. Robert Kronenberg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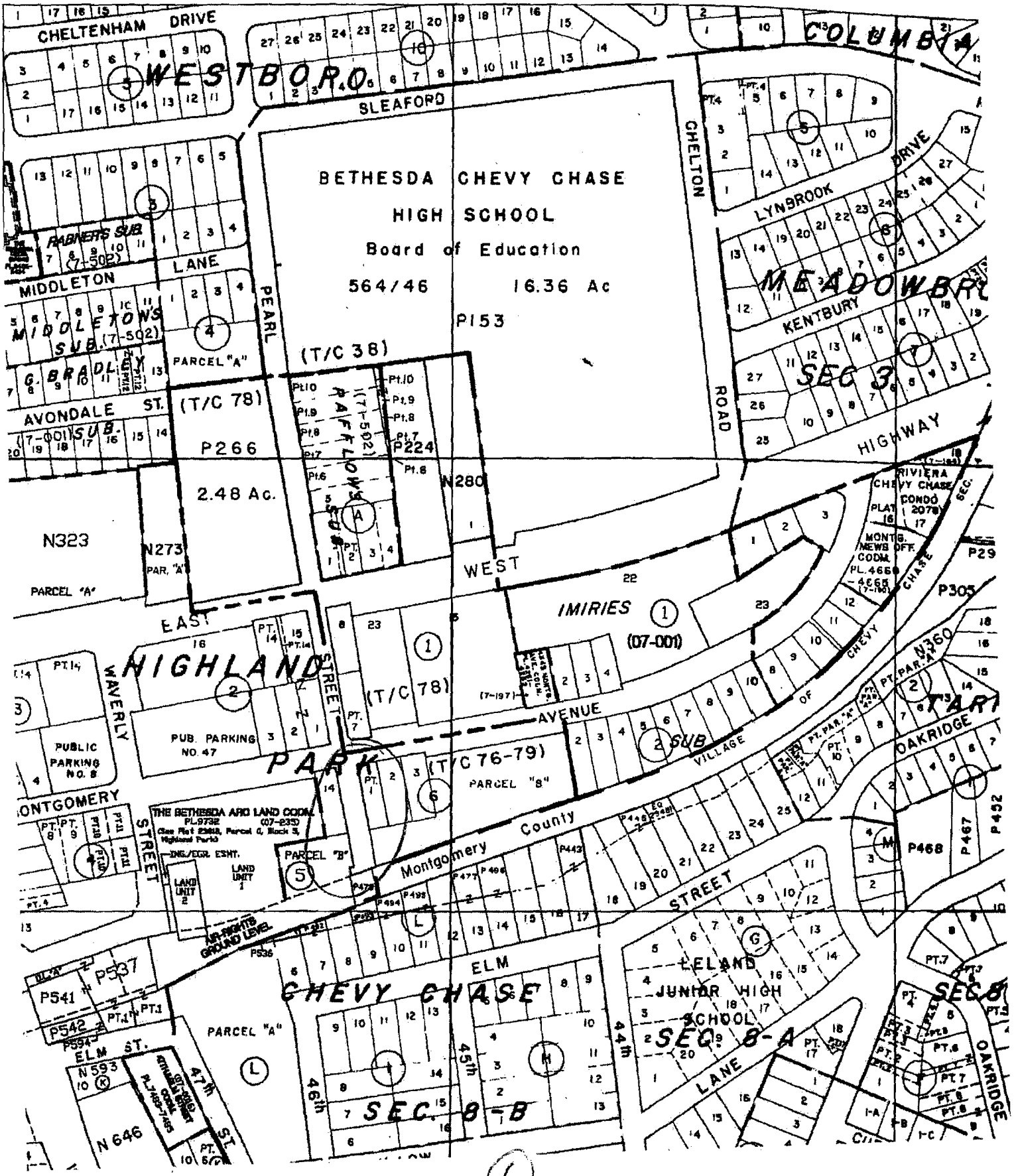
CHELTENHAM DRIVE
WESTBORO
SLEAFORD
COLUMBIA
BETHESDA CHEVY CHASE
HIGH SCHOOL
Board of Education
564/46 16.36 Ac
P153
CHELTON ROAD
LYNBROOK DRIVE
MEADOWBROOK
KENTBURY
SEC 3
HIGHWAY
FABNERS SUB (7-502)
MIDDLETON LANE
MIDDLETONS SUB (7-502)
PEARL
PARCEL "A"
(T/C 38)
G. BRADLEY
AVONDALE ST.
(7-001) SUB.
(T/C 78)
P266
2.48 Ac.
RAFFLOWS SUB (7-502)
P224
N280
N323
N273
PAR. "A"
PARCEL "A"
WEST
EAST
IMIRIES
(07-001)
RIVIERA CHEVY CHASE CONDO PLAT 2078
MONTG. MEWS OFF. CONDM. PL. 4660 - 4665
CHEVY CHASE
P305
P29
N360
HIGHLAND
WAVERLY STREET
PUB. PARKING NO. 47
PUBLIC PARKING NO. 8
PARK
(T/C 78)
(T/C 76-79)
PARCEL "B"
AVENUE
VILLAGE OF CHEVY CHASE SEC 2 SUB
OAKRIDGE
P452
P467
P468
MONTGOMERY
THE BETHESDA ARO LAND CODM PL.9732 (07-235)
Montgomery County
STREET
ENG/EGR. ESMT.
LAND UNIT 2
LAND UNIT 1
AIR RIGHTS GROUND LEVEL
P536
P537
P541
P542
P594
ELM STREET
CHEVY CHASE
PARCEL "A"
ELM ST.
N593
N646
47th
45th
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SEC. 8-B
LELAND JUNIOR HIGH SCHOOL
SEC. 8-A
LANE
OAKRIDGE

WRITTEN TESTIMONY TO THE MONTGOMERY COUNTY COUNCIL
Notes on the July 2016 Planning Board Draft of the Bethesda Downtown Plan

Peter Singelmann and Maria Elena Singelmann, on behalf of the 4720 Chevy Chase Drive Condominium Association
October 20, 2016

Overview and General Concerns:

As members of the Chevy Chase Drive Condominium Association, whose views align with other members of the Coalition of Bethesda Area Residents (CBAR) to promote the integrative nature of the Bethesda Downtown Plan (BDP), we value the vision of development demonstrated by the work of the county's Planning Board and would like to use this opportunity to draw your attention to issues of concern to our communities. We urge the Montgomery County Council to consider making the revisions set out below to address the specific concerns regarding zoning changes and their consequences.

From the beginning, we have contributed to the review of the Bethesda Development Plan. A number of urgent issues remain to be resolved specifically in the area called the "South Bethesda District." They include the proposed changes in zones that could lead to increased building heights and population density on Chevy Chase Drive, the possibility of future zoning changes for the fire station, and the proposed extension of Strathmore Street from Bradley Boulevard to Chevy Chase Drive.

Our positions on the specific issues of concern are as follows: 1) we oppose the proposed extension of Strathmore Street for motor vehicle traffic, because it would break up the neighborhood around Chevy Chase Drive and compound the existing problems of insufficient parking and congested traffic. 2) We do, however, support a new pedestrian and bicycle path from Bradley Blvd. to Norwood Park to improve access to the park as consistent with the Bethesda Downtown Plan's goal of improving the quality of life for area residents. 3) We favor preserving Fire Station #6 as a standalone station and oppose its redevelopment in a multi-purpose commercial or combined commercial and residential zone. And 4) we request that the FAR-value of 1.5 for residential density not be rounded up to 1.75 for the redevelopment of the Aldon properties.

Underlying these concerns are issues of zoning and street extension that are affecting not only to our neighborhood. The five major land use and zoning principles of the 1990 Bethesda-Chevy Chase Master Plan include the point that to secure residential communities, it is imperative to "reduce community traffic that cuts through residential neighborhoods" and to make "...pedestrian circulation...less hazardous" (*Comprehensive Amendment to the Bethesda-Chevy Chase Master Plan: Land Use and Zoning Plan*, approved 1990: p. 91). It is this task that concerns the residents of the neighborhoods surrounding Chevy Chase Drive and their associations. It will be equally weighed by those who will be residents when it is redeveloped.

1. **Expansion of Strathmore Street to Chevy Chase Drive:**

- One problem with the proposed opening of the intersection is the proximity of the Strathmore/Bradley intersection to that of Bradley/Bethesda Blvd., the need for a new traffic light at that intersection to allow entrance from Strathmore to Bradley, and the corresponding prospect for additional traffic jam on Bradley due also to the future population growth in the zone north of Chevy Chase Drive. This would not only affect this area but also the residential area on the western end of Chevy Chase Drive that can be expected to become a new commuter short-cut for rush-hour traffic moving between the Chevy Chase Drive and Hallandale Road residences toward major routes leading north and south.

- The proposed extension of Strathmore does not have a clear language specifying what is required for accommodation by developers and property owners to mitigate traffic and parking issues north and at the proposed extension at the south end of that street.

- In addition, such an extension of Strathmore for through-traffic would require streamlining the traffic infrastructure changing the street pattern. Accordingly, it would unfavorably affect the residential nature of the neighborhood dominated by town houses.

- We are, however, supporting a new pedestrian/bicycling path from Bradley Blvd. to Norwood Park. But we oppose it as a route for vehicular traffic. In its section on "Land Use and Zoning," the 2016 Draft of the Bethesda Downtown Plan (p. 134) recommends that these specific lands be used "to provide additional access and mobility from downtown Bethesda to South of Bradley and Norwood local Park." We strongly urge you to either delete this vague reference to "south of Bradley" or clarify what is meant here: A street? Or merely a walking/bicycling extension of Strathmore? A local focus or an aim at a route to south I-270 via Hallandale? We agree with the desirability the pedestrian/bicycling path, but not with that of the other two interpretations. The formulation needs clarification.

- The justification of the extension of Strathmore for vehicles to provide "greater access to Norwood Park" not only ignores that there is no space available between Bradley and the park, or in that park, for additional parking; and it does not assess the consequences for a more congested traffic and its impact on the goal of accessibility. Two different issues are confounded here: that of parking and of fluid transit without addressing either explicitly, and even less resolving, the problems, of either one.

- Parking is indeed an issue in its own right during the frequent public or private events organized in the park, particularly during the summer season. The issue needs to be addressed. In the current draft, it is bypassed for Norwood Park, which is not within the plan area.

- For any road changes, the language in the plan must explicitly reject any taxpayer responsibility and require property owners of new development project to cover any

2. Fire Station #6 and Rezoning:

Fire Station #6 should be upgraded or rebuilt as a standalone station as needed to provide effective and prompt emergency services. In this regard, we fully agree with the well-documented arguments of the Chevy Chase West Neighborhood Association and endorse its testimony submitted to the Montgomery County Council on October 18, 2016. Our basic concerns can be summarized as follows:

- Encasing the station in a multi-purpose commercial or combined commercial/residential zone, even at a reduced level compared with the prior plan, would violate the transitional status of this area of low-density multi-family housing units positioned between the downtown area and residential neighborhoods to the south. It would, contrary to the intents of the BDP, break the balance of the transitional area between small/medium-size residences and the high-rise/commercial area of downtown Bethesda.

- Such rezoning and its impact on the mixture of single-family housing on Nottingham Drive at the back side of the fire station, and a potential large-scale condo/commercial complex on the lot of the fire station, would counteract the principles declared under the progressive variety of goals stated by the *1990 Bethesda–Chevy Chase Master Plan* and reiterated in the vision of the current Bethesda Downtown Plan.

3. Zoning and the FAR Value:

- After the zoning code was rewritten in 2014, planners recommended a density of 1.5 for the Aldon properties. The Planning Board decided not to map density and to simply convert the R-10 properties to a density that corresponded to current density.

- Under the new formula, the 1.50 density value of the properties worked out to be 1.61, and under the zoning code density is only awarded in .25 increments and is never rounded down, only up. So Aldon will be mapped at FAR (density) of 1.75. We believe that an adjustment should be made here to ensure that the maximum FAR value remains 1.5 as it has been.

Summary:

The Chevy Chase Drive Condominium Association and neighboring associations welcome the vision and the goals of the Bethesda Downtown Plan as a response to the urgent needs of social, economic and demographic changes along very progressive lines. Our comments focus on a few critical issues we believe require further consideration. In general terms, they entail the correspondence between the general principles stipulated by the BDP and their realization. Specifically, this applies here to (1) preventing the physical break-up of the residential community around Chevy Chase Drive through street changes, such as the proposed extension of Strathmore Street that would insert new through-traffic and congestion in an area not set up for it and that is designed to be residential in nature; (2) maintaining Fire Station #6 as a well-maintained, adequately-funded and self-contained unit within the community without future changes in its zoning code; and (3) applying the *principle* of the FAR value by not rounding up the current measurement for future redevelopment projects.

National
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October 19, 2016

VIA HAND DELIVERY & EMAIL
The Honorable Nancy Floreen, Council President
Montgomery County Council
100 Maryland Avenue, Sixth Floor
Rockville, Maryland 20850

Re: All of the properties in the block framed by Wisconsin Avenue, Hampden Lane, East Lane, and Montgomery Lane, as well as 7316 Wisconsin Avenue, Bethesda (the "Assemblage"[1]) – Written Testimony for the October 19, 2016 Montgomery County Council ("Council") Public Hearing on the Bethesda Downtown Sector Plan (the "Sector Plan")/July 21, 2016 Montgomery County Planning Board ("Planning Board") Draft Sector Plan ("Draft Plan")

Dear Council President Floreen and Members of the County Council:

National Real Estate Advisors ("National"), also representing Washington Property Company ("WPC") and the Chevy Chase Land Company of Montgomery County, Maryland ("CCLC"), collectively the owners or contract owners of the Assemblage outlined on the attached map` (collectively, the "Partners"), urge the Council through its deliberations and approval of the Sector Plan to provide the planning and zoning tools needed to facilitate the Assemblage to be redeveloped with up to one million square feet of mixed-use transit-oriented development that will accommodate a market-driven mix of uses that might include major employment, high-rise residential, hotel, retail and/or personal service uses at this prime location with immediate proximity to the Metro Red Line and Purple Line stations in the urban core of Downtown Bethesda (the "Urban Core Redevelopment"). The Urban Core Redevelopment will include a significant central public park/plaza and related public and private open spaces and amenities made

[1] The Assemblage includes the following properties: 4703 Hampden Lane, 4705 Hampden Lane, 4707 Hampden Lane, 4709 Hampden Lane, 4715 Hampden Lane, 4719 Hampden Lane, 4714 Montgomery Lane, 4720 Montgomery Lane, 7316 Wisconsin Avenue and 7340 Wisconsin Avenue.

possible through the Assemblage and the closure and abandonment of a lightly-used, one-block section of Hampden Lane, between Wisconsin Avenue and East Lane (the "Abandonment"). The Assemblage and Urban Core Redevelopment, including the Abandonment, will allow for the urban transformation of almost two full city blocks of approximately 122,000 square feet of gross tract area in the central core of the Bethesda Central Business District, providing an unparalleled redevelopment and economic development opportunity for not only Bethesda but also for the County and the entire region.

Assemblage Owners and Developers

The Council is familiar with the history and commitment of WPC and CCLC to long-term, high-quality development and redevelopment throughout the County and region. National adds significantly to the Partners' vast resources, urban development expertise and commitment to excellence. National is a real estate investment management and development firm known nationwide for investing in and developing complex, transformative, mixed-use projects in urban cores throughout the country. Recognized for its socially responsible commitments to sustainability and responsible contracting, National operates with a fiduciary mindset and with an eye on the interests of all stakeholders, particularly the neighboring community.[2]

Requested Abandonment of a Portion of Hampden Lane

The Urban Core Redevelopment will have direct access to the Bethesda Metro Red Line Station, the Purple Line Station, the Bethesda Bus Station, Wisconsin Avenue and the Crescent Trail, making this location highly accessible to all forms of transportation—rail, bus, car, walking and bicycling. The Abandonment will serve to improve upon this accessibility by converting and incorporating into the Urban Core Redevelopment the

[2] To learn more about National and its projects, please visit www.natadvisors.com and www.natrealestatedevelopment.com

Abandonment area which experiences low vehicle volume, while enhancing pedestrian and bicycle circulation, as well as accessibility to the transit stations, while also maintaining the use of Hampden Lane for vehicular access between Woodmont Avenue and Wisconsin Avenue, via East Lane and Montgomery Lane. Perhaps unique to any property in Bethesda, the Abandonment will also permit the creation of a significant central park/plaza which will help define the urban core of the Downtown with a signature public space and identity, allowing for large public gatherings as well as enhanced north-south and east-west pedestrian circulation and accessibility. This Urban Core Redevelopment, including the Abandonment, furthers the Draft Plan's goals for urban design and place-making by providing a gathering space in the urban core, linking "streets, through-block connections, greenways, and trails to create a well-connected network," and designing "streets not just for mobility but also as great public spaces for gathering, events and play." (Page 17-18 of the Draft Plan).

Currently, the area of the Abandonment serves virtually no circulatory or capacity purpose for the movement of vehicles through the Downtown Bethesda area. The Planning Board's staff (the "Planning Staff") and its consultant for the Draft Plan have evaluated the estimated traffic effects resulting from the Urban Core Redevelopment and the Abandonment based on the traffic forecasts included in the 2040 Sector Plan Vision and the proposed one million square feet at the Assemblage. Based on the Planning Staff's evaluation of this traffic impact, Kimley-Horn and Associates ("Kimley-Horn"), on behalf of the Partners, prepared a detailed analysis of the impacts of the Abandonment on the area transportation network, concluding that the resulting road network will continue to operate within the Sector Plan's recognized congestion standard for adequacy (a copy of Kimley-Horn's traffic impact analysis is attached).[3] Therefore, the Urban Core

[3] Kimley-Horn's traffic impact analysis demonstrates that the critical lane volume (CLV) at Old Georgetown Road/East West Highway and Montgomery Lane/Avenue will be within the Sector Plan's congestion standard of 1,800 CLV if the existing one-way operation of Old Georgetown Road/East West Highway and Montgomery Lane/Avenue were to continue; and if these existing

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Redevelopment and Abandonment provides a unique opportunity to accommodate a large mixed-use transit-oriented development with significant public open spaces and a plaza in the urban core of Downtown Bethesda while ensuring the adequacy of existing road network.

Core Areas of the Bethesda CBD Should Be Given Maximum Density and Height

The Draft Plan recommends retaining the Property's currently mapped density limit, but with an increase to a maximum building height of 250 feet for the entire Assemblage such that it would be rezoned to CR-5.0, C-5.0, R-4.75, H-250. Aside from the manner in which density will ultimately be permitted for the Assemblage and other properties in the Sector Plan area, the Assemblage must be permitted to have the maximum allowable height and density permitted in the CR zone, which currently is established through the Zoning Ordinance at 300 feet of building height and an 8 FAR. Through the proposed overlay zone for the implementation of the Sector Plan (the "Bethesda Overlay Zone" or "BOZ") this maximum allowable height and density should be increased for the core areas of the CBD, including the Assemblage. The core areas are well protected from the neighboring residential areas surrounding the Sector Plan area, and higher density and height for buildings at the urban core will not face issues of compatibility and serve as the primary opportunity for economic development for the entire County. Limiting height and density below what the market place desires would be most unfortunate, and we urge the Council to recognize the opportunities presented in order to attract a significant state-of-the-art, urban mixed-use project.

* * *

We look forward to working with the Council and others to arrive upon a Sector Plan and BOZ that will allow the vast potential of Downtown Bethesda, including the Urban Core

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one-way operation streets (Old Georgetown Road/East West Highway and Montgomery Lane/Avenue) were to be converted to two-way operation, both of these intersections would still operate within the 1800 CLV standard of adequacy.

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Redevelopment and the Abandonment, to be realized. Thank you for your consideration of these comments. If you have any questions or require any additional information, please do not hesitate to contact us.

Very truly yours,

NATIONAL REAL ESTATE ADVISORS

Jeffrey Kahne
President and CEO

cc: Montgomery County Councilmembers
Ms. Marlene Michaelson, Senior Legislative Analyst
Mr. Bob Dalrymple
Mr. Charlie Nulsen, Washington Property Company
Thomas L. Regnell, Chevy Chase Land Company

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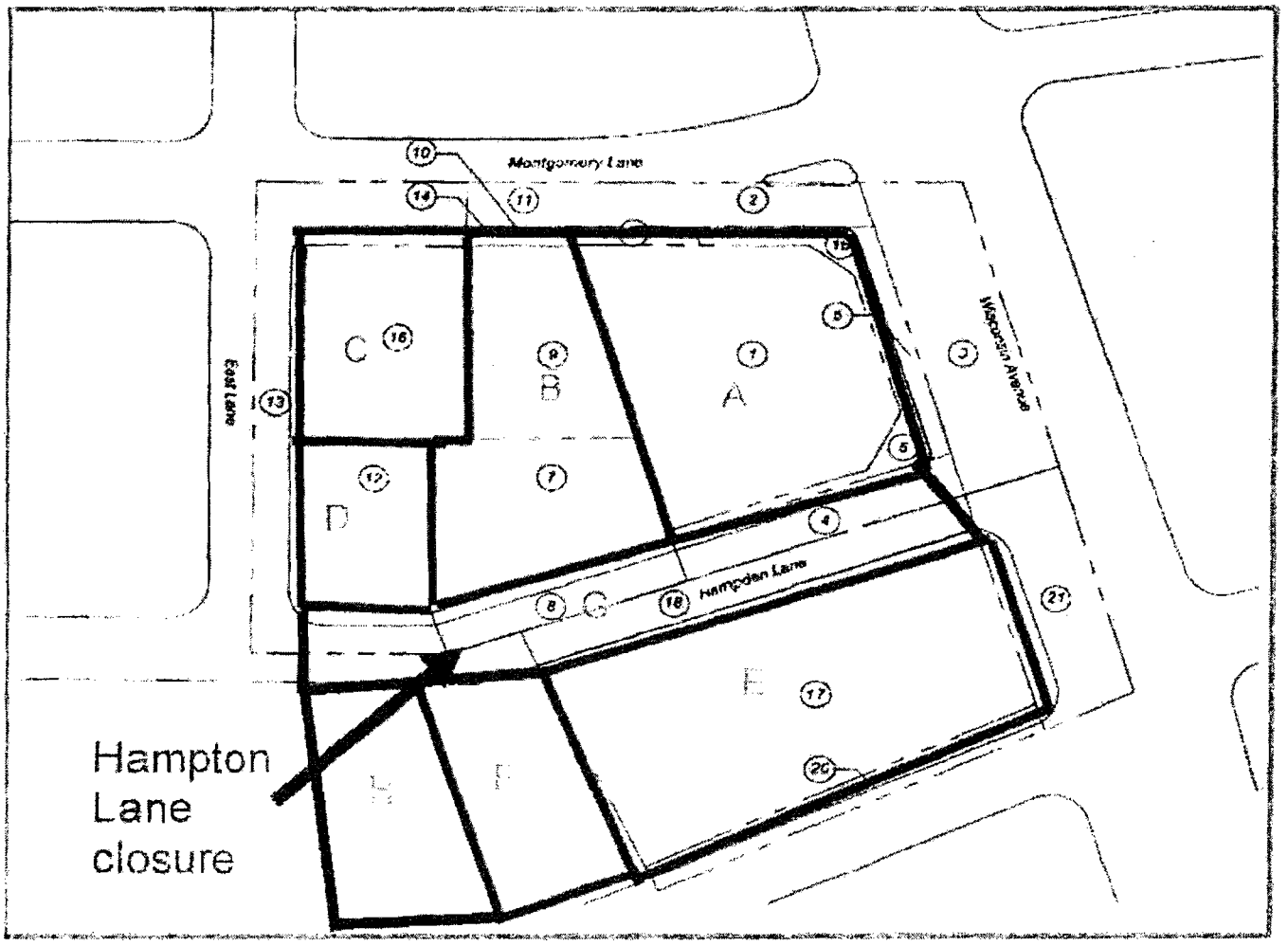
Map of the Assemblage



Parcel A: 7340 Wisconsin Avenue
Parcel B: 4714 Montgomery Lane/ 4709, 4705, 4709 & 4715 Hampden Lane
Parcel C: 4720 Montgomery Lane
Parcel D: 4719 Hampden Lane
Parcel E: 7316 Wisconsin Avenue
Parcel F: Option under negotiation not required for assemblage.
Parcel G: Hampden Lane
Parcel H: Open Space (part of the Bethesda Discovery Trail)

Kimley»Horn

Memorandum

To: Montgomery County Council

From: Edward Y. Papazian, P.E. EYP

Date: October 17, 2016

RE: Bethesda CBD Proposed Assemblage and
Hampden Lane Abandonment
Traffic Evaluation

EXECUTIVE SUMMARY

This memorandum presents an analysis that demonstrates that the proposed closure and abandonment of Hampden Lane as a public street between Wisconsin Avenue and East Lane in conjunction with the assemblage and redevelopment of several properties along the west side of Wisconsin Avenue between Elm Street and Montgomery Lane will be accommodated on the area street network and that this section of public right-of-way is not necessary for present public use or anticipated public use in the foreseeable future.

The following sections describe the development of the traffic forecasts and the traffic analysis results.

INTRODUCTION

This memorandum presents the results of an analysis prepared in the Bethesda Central Business District (CBD) for a mixed-use, transit-oriented development on an assemblage generally bounded by Wisconsin Avenue, Elm Street, East Lane and Montgomery Lane. The proposed development that was tested consists of a mix of uses totaling one million square feet that includes office, high-rise residential, hotel, and retail.

As part of this plan, a significant public plaza will be created as a result of the abandonment of the lightly used section of Hampden Lane between Wisconsin Avenue and East Lane. The resulting assemblage and abandonment will result in an almost two-block tract of land with enhanced pedestrian and bicycle connections in all directions including direct access to the north and south portals of the Bethesda Metrorail station and to the Purple Line station. It will also serve to connect the urban core of Bethesda Downtown with the rest of the Central Business District. The primary present use and anticipated future public use of the existing right-of-way under study is not critical to the vehicular circulation of the area road network, and the future use of this right-of-way with the

proposed redevelopment (once abandoned) will enhance the pedestrian and bicycle circulation over the existing conditions.

DESCRIPTION OF ANALYSES

The Montgomery County Planning Department and its consultant for the Downtown Bethesda Sector Plan were enlisted to provide a quick response evaluation of the traffic effects of this level of development and of the proposed abandonment of Hampden Lane. The traffic effects were evaluated by adding the estimated traffic generated by the one million square feet of development on the assemblage to the traffic forecasts based on the 2040 Sector Plan Vision. The 2040 Sector Plan Vision assumed that the assemblage would have approximately 750,000 square feet of development. The proposed one million square feet represents a 250,000 square foot increase in development on the assemblage.

The trips along Hampden Lane were reassigned to other intersections in the study area. The trips generated by development in the Bethesda CBD were revised to show the effects of the additional development on the assemblage parcel. The effects on the street network of the additional development with the Hampden Lane abandonment were measured. Due to the effects of internal capture, the non-driver mode-share in the area, and the presence of the grid of streets, the effects of the additional development on individual intersections are less than may be expected in suburban non-transit areas.

Alternative street networks were considered. In addition to including the abandonment of Hampden Lane, alternate treatments of the one-way pair between Old Georgetown Road/East West Highway and Montgomery Lane/Avenue were evaluated. The treatments include retaining the existing one-way pair and converting these streets to two-way operation.

DISCUSSION OF RESULTS

The following summarizes the critical lane volumes (CLV) at the two intersections that would be most affected by the proposed development and the closure of Hampden Lane. These intersections are (1) Wisconsin Avenue and Old Georgetown Road/East West Highway and (2) Wisconsin Avenue and Montgomery Lane/Avenue. Table 1 shows capacity analysis results based on existing traffic and traffic volumes based on the 2040 Sector Plan Vision on the street network that includes Hampden Lane remaining open as a public street.

Table 1 **Capacity Analysis Results – Existing and 2040 Vision Plan**		
Existing Traffic	AM	PM
Wisconsin Avenue and Old Georgetown Road/East West Highway	1060	1093
Wisconsin Avenue and Montgomery Lane/Avenue	890	1155
2040 Vision Plan One-Way Operation – Hampden Lane Remain Open		
Wisconsin Avenue and Old Georgetown Road/East West Highway	1179	1203
Wisconsin Avenue and Montgomery Lane/Avenue	959	1249
2040 Vision Plan Two-Way Operation – Hampden Lane Remain Open		
Wisconsin Avenue and Old Georgetown Road/East West Highway	1375	1427
Wisconsin Avenue and Montgomery Lane/Avenue	1360	1765
1060 – Critical Lane Volume		

These results show that the nearby intersections will operate within the congestion standard based on the 2040 Vision Plan and with one-way and two-way operation of the current one-way pair. Further analyses were performed for the Wisconsin Avenue and Montgomery Lane/Avenue intersection with the two-way operation of Old Georgetown Road/East West Highway and Montgomery Lane/Avenue. No further analysis with the one-way operation was performed since the intersections will operate well within the congestion standard under this scenario. Table 2 shows capacity analysis results at Wisconsin Avenue and Montgomery Lane/Avenue based on the 2040 Sector Plan Vision traffic, two-way operation of the existing one-way streets, and the closure of Hampden Lane as a public street.

Table 2 **Capacity Analysis Results – 2040 Vision Plan**		
2040 Vision Plan Two-Way Operations – Hampden Lane Closure	AM	PM
Wisconsin Avenue and Montgomery Lane/Avenue	1413	1776
1413 – Critical Lane Volume		

These results show that the Wisconsin Avenue and Montgomery Lane/Avenue intersection, as well as all others, will operate within the congestion standard with the 2040 Vision Plan and with the two-way operation and the closure of Hampden Lane.

With the additional development on the assemblage, this intersection was analyzed for the PM peak hour. The quick response evaluation was not performed for the AM peak hour since the AM results in Table 2 were well within the congestion standard and would remain within the standard. Table 3 shows capacity analysis results in the PM peak hour at Wisconsin Avenue and Montgomery Lane/Avenue based on the proposed one million square feet on the assemblage, two-way operation, and the closure of Hampden Lane.

Table 3 **Capacity Analysis Results- Additional Development**	
2040 Vision Plan Plus Additional 250,000 SF at Assemblage Two-Way Operation – Hampden Lane Closure	PM
Wisconsin Avenue and Montgomery Lane/Avenue	1782
1782 – Critical Lane Volume	

These results show that the Wisconsin Avenue and Montgomery Lane/Avenue intersection and all other intersections will operate within the congestion standard with the proposed development of the

assemblage and with the proposed abandonment of Hampden Lane between Wisconsin Avenue and East Lane.

SUMMARY AND CONCLUSIONS

These analyses show that the mixed-use redevelopment of one million square feet on the proposed assemblage of property and the closure and abandonment of Hampden Lane between Wisconsin Avenue and East Lane will be accommodated without any negative or adverse traffic consequences on the area street network, and the proposed redevelopment provides a tremendous opportunity to improve and enhance pedestrian circulation and connectivity to Metro and other forms of transportation.

These results show that the critical lane volumes will be well within the congestion standard of 1800 if the existing one-way operation of Old Georgetown Road/East West Highway and Montgomery Lane/Avenue were to continue. If these streets were to be converted to two-way operation, the Wisconsin Avenue and Montgomery Lane/Avenue intersection would operate at a level approaching the 1800 CLV standard, but within the congestion standard.

Pedestrian scramble

From Wikipedia, the free encyclopedia

A **pedestrian scramble**, also known as **scramble intersection** (Canada), **'X' Crossing** (UK), **diagonal crossing** (US), and, more poetically, a **Barnes Dance**, is a pedestrian crossing system that stops all vehicular traffic and allows pedestrians to cross an intersection in every direction, including diagonally, at the same time.

One of the world's most heavily used pedestrian scrambles, at Hachikō Square in Shibuya, Tokyo

It was first used in Canada and the United States in the late 1940s,[1][2] but it has since fallen out of favour with traffic engineers in the United States, as it is seen as prioritising flow of pedestrians over flow of car traffic.[2] However, it prioritises pedestrians over vehicles only during a portion of the traffic control cycle, but it prioritising vehicles over pedestrians for the remainder of the cycle. It also has benefits for pedestrian amenity and safety, which have led to new examples being installed in many countries in recent years.

Contents

Development

The name "Barnes Dance" commemorates traffic engineer Henry Barnes. While he did not claim to have invented it himself, Barnes was a strong advocate of it, having observed the difficulties his daughter experienced on her way to school.[3] He first introduced it in his home city of Denver, Colorado in the 1940s and later brought it to Baltimore and New York City.[2] In his autobiography, *The Man With the Red and Green Eyes* (1965), Barnes recorded that a City Hall reporter, John Buchanan, first coined the phrase by writing that "Barnes has made the people so happy they're dancing in the streets."[4]

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Application

In Australia

In Adelaide, there are two scrambles on either end of Rundle Mall, King William Street and another on Pulteney Street. There is another crossing at the intersection of King William Street, Waymouth Street and Pirie Street.

In Brisbane, there are two noteworthy scrambles: one in the central business district at the intersection of Adelaide and Edward Streets, adjacent to the Queen Street Mall and an entrance to Translink's Central Station, and a second at the intersection of Vulture and Boundary Streets in the eclectic West End suburb. In Darwin, there is a pedestrian scramble at the CBD end of Smith St Mall.

In Melbourne, there is a pedestrian scramble at the intersection of Flinders and Elizabeth Streets, in front of Flinders Street railway station, allowing pedestrians to walk directly to the station and the two island tram platforms in the middle of both streets.

In Sydney, there are numerous examples in built-up commercial and CBD areas, like the intersection of George and Druitt Streets (with one of the corner blocks being the Sydney Town Hall), Church Street in Parramatta also has them, as does the Fairfield, New South Wales central business district.

In Canada

Vancouver was one of the first cities worldwide to use the concept (at individual locations). London, Ontario, had a Barnes' Dance crosswalk in the 1960s at the intersection of Clarence and King streets. In Toronto, the intersection of Yonge Street and Dundas Street, the location of Yonge-Dundas Square, has the city's first installed scramble intersection[5] and has since been joined by others in the downtown area. In 2015, Toronto is eliminating a scramble crossing "after an evaluation study found 'modest positive benefits for pedestrians' and 'negative impacts to vehicular traffic.' The staff report also noted that sideswipe collisions at Bay and Bloor have more than doubled and rear-end type crashes have increased by 50% "likely due to increased driver frustration." As of September 2015, Kingston, Ontario, will have a scramble crosswalk at the corners of Union Street and University Avenue to increase the safety of Queen's University students. Calgary has two pedestrian scrambles in the Eau Claire neighbourhood. Quebec City and Banff also have a few pedestrian scramble intersections.

In Japan

Pedestrian scrambles are ubiquitous in Japan, where over 300 such intersections exist, it is known as a scramble crossing (スクランブル交差点 *sukuranburu-kōsaten*).

The largest, and most famous, diagonal crossings are found in Tokyo, outside Shibuya station [6] and Sukiyabashi, Ginza.

Kansai also has many diagonal crossings, including four outside the north exit of Kyoto Station alone. Most of the diagonal crossings in Osaka are located in the south of the city, in Abeno ward.

The first diagonal crossing to be installed in Japan was in the Kyushu city of Kumamoto in 1969.

In the Netherlands

In the Netherlands, a version of this crossing, called a Simultaneous Green light for Bicyclists, combined with an all way green light for pedestrians, is currently being used in a number of intersections in the North and East of the Netherlands.

In New Zealand

In New Zealand, the first Barnes Dance was introduced in 1958 on Queen Street, Auckland, and was soon found in other cities as well.[3] The Queen Street examples are Custom Street, Shortland, Wyndham, Victoria and Wellesley Street intersections. When Mayoral Drive was constructed in the 1970s it was not created as a Barnes Dance - indicative of a change in traffic management models.

The Queen Street crossings remain today, despite early 2000s attempts to remove them for greater car priority, and have been extended with greater numbers of phases and pedestrian green times during the late 2000s. Additionally, some Barnes Dance intersections do not provide painted crossings and are therefore de facto, such as the intersection of Grafton Rd and Symonds St within the University of Auckland city campus.

Karangahape Road had two such crossings - the Queen Street / K Road intersection was modified in the 1990s but the Pitt Street / K Road intersection is still a Barnes Dance. On nearby Ponsonby Road there is a Barnes Dance at Franklin Road. There is a Barnes Dance on the Great North Road at the Surrey Crescent intersection with Williamson Avenue. There is also a Barnes Dance at the multiple street intersection of Lake Road, Hurstmere Road, Northcroft Street and The Strand in Takapuna.

Barnes Dances also existed in several other cities in New Zealand, notably on Colombo Street, Christchurch and at Cargill's Corner in South Dunedin, but have been gradually phased out. The only Barnes Dance remaining in the South Island at present is on Stafford Street in Timaru and three in the Christchurch CBD.

In the United Kingdom

The UK's first diagonal crossing in Balham

In London, the first formal diagonal crossing built in the UK was opened in Balham town centre in 2005. The success of the Balham crossing was followed by conversion of the existing crossing facilities at Oxford Circus in 2009,[7] Further diagonal crossings were constructed in Wood Green in 2010 and Wimbledon in 2012.

Swansea opened a diagonal crossing in 2015.

Harrogate also opened a diagonal crossing in 2015. Since opening, some have criticized it for being too confusing and claim that its poor design led to the death of an elderly pedestrian who was struck by a vehicle in its first year of operation.

In the United States

Kansas City was one of the first cities that used a pedestrian scramble system (at a few individual locations only).[1]

Denver formerly used the pedestrian scramble system at nearly every intersection in the downtown business district. The practice was eliminated on 11 April 2011, in order to "balance" resources allotted to pedestrians, vehicles, and mass transit. Complete stops of traffic from all directions will still occur but the diagonal crossing characteristic of the Barnes dance will no longer be legal.[8][9]

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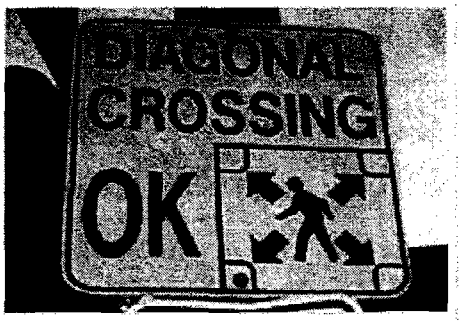
In Washington, D.C., diagonal crossing existed at several downtown intersections until the mid-1980s. It is being tried again on an experimental basis at 7th and H streets Northwest beginning May 2010.[10]



Sign for a pedestrian scramble in the United States

In New Haven, all of the intersections with traffic lights have implemented the pedestrian scramble, since at least 1974.

In New York City, there are numerous signals with a pedestrian scramble phase; those are most often found in intersections with only one vehicle phase.[11] A notable pedestrian scramble exists in Lower Manhattan at the intersection of Vesey Street, Broadway, Park Row, and Ann Street.[12]

Signals at several intersections in Pittsburgh, including along Craig Street at Centre Avenue, Bayard Street, Fifth Avenue, and Forbes Avenue near the University of Pittsburgh; on Forbes at Morewood Street at the main entrance to Carnegie Mellon University; and on Forbes at Murray and Shady Avenues in Squirrel Hill stop traffic from all directions and allow pedestrians to cross in all directions. They are not, however, specially signed as in the Seattle example below; they use a standard pedestrian crossing light (with added audio signal for the visually impaired).

The signal at the intersection of McKinley and Riverside Avenues on the campus of Ball State University in Muncie, Indiana, is called the "Scramble Light" and is identified by the university as a campus landmark.[13]

Ohio University in Athens, OH has numerous legal diagonal crosswalks in use around campus, as well as some through uptown.

Some pedestrian scrambles are implemented only temporarily, during times when extremely high pedestrian traffic is expected. A notable example of this occurs on home-game Saturdays at the intersection of Main Street and Stadium Boulevard in Ann Arbor, Michigan, which is immediately adjacent to Michigan Stadium. Local police take control of the vehicular signals and indicate the pedestrian phase by playing Michigan's fight song, "The Victors."

On May 31, 2013, Chicago began testing a pedestrian scramble on the intersection of State Street and Jackson Boulevard.[14]

In Nevada, both Reno and Sparks have pedestrian scramble interchanges. Reno's is at the intersection of Virginia and 2nd Avenue downtown to accommodate casino pedestrian traffic, and Sparks' are along Victorian Avenue to assist people in crossing to festivals that are held along that street.

Seattle uses the pedestrian scramble at 1st and Pike, 1st and University, 1st and Cherry, Beacon and 15th, 15th Ave NE and NE 40th St, and at the West Seattle Junction. The intersections are marked with a sign labeled "All Way Walk."[15] Bellevue, Washington also has one at 108th Ave NE and the NE 6th Street pedestrian walkway, on the west side of Bellevue Transit Center. It is not signed as an all-way walk, but has pedestrian walk lights, and is accompanied by an auditory alert of "Walk sign is on for all crossings."

San Francisco has several pedestrian scrambles along Stockton Street in Chinatown, Montgomery Street in the Financial District, and in several other locations.[16]

In Los Angeles County, pedestrian scrambles are used in the Rodeo Drive commercial area of Beverly Hills, at the intersection of Westwood Boulevard and Le Conte Avenue as well as Weyburn and Broxton Avenues in the Westwood section of Los Angeles immediately adjacent to the UCLA campus, and at the intersection of Jefferson Boulevard and McClintock Avenue near the University of Southern California, as well as in Pasadena at the intersection of Raymond and Colorado.

(24)

In San Diego, One of the locations that uses pedestrian scrambles is at the intersection of Market St & 5th Ave.

The City of El Paso, Texas added pedestrian scramble markings to the intersection of Santa Fe Street and Main Drive in Downtown in April 2015.

In Portland, Oregon, a pedestrian scramble was added in November 2015 to the intersection of NW 11th Ave and NW Couch St, near Powell's Books.[17]

The campus of UC Davis recently installed a bike/pedestrian scramble near its recreation center.

Advantages and disadvantages

Since it stops all motor vehicles rather than allowing partial vehicle movements to coexist with partial pedestrian movements, the pedestrian scramble has sometimes been seen as inefficient by traffic engineers, with its removal believed as creating big savings in delays and congestion. An advantage is that it eliminates pedestrians from flowing through the crosswalks moving in the direction of the moving traffic allowing car traffic to make left or right turns without being blocked by pedestrians in the crosswalk. By eliminating the car/crosswalk problem traffic often can flow faster. Proper implementation requires that both drivers and pedestrians are aware of the traffic rules at such intersections. In some countries, that has led to a removal of at least individual installations. However, critics have dismissed these moves as further subordinating pedestrians to cars and consider the shared turns of motor vehicles and pedestrians as unnecessarily intimidating.[2]

The pedestrian scramble makes sense only if large numbers of pedestrians are expected, and they will also have enough space to gather on the sidewalks in larger numbers.[18] Under certain circumstances, pedestrian scrambles could decrease safety, as the average waiting times for pedestrians and car drivers are increased, thus creating more likelihood of people disobeying the signals.[19]

Further research at Transport for London has suggested the installation of a diagonal crossing can reduce pedestrian casualties by 38%.

Image gallery

A scramble crossing in Cologne, Germany

King George Street and Jaffa Road pedestrian scramble in Jerusalem, Israel (2007)

Oxford Circus in London with a new pedestrian scramble in November 2009

Pedestrian scramble at New York City's Union Square

See also

- Traffic light

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External links

- Time-lapse video of scramble intersection at Yonge and Dundas, Toronto (http://vimeo.com/1626058?pg=embed&sec=1626058)

Wikimedia Commons has media related to ***Pedestrian scrambles***.

Categories: Pedestrian crossing components | Road transport | Traffic law | Transportation engineering

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NYC Pols: Bring Barnes Dance Back for Most Dangerous Intersections

BY JEN KINNEY | MAY 11, 2016

A famous Barnes Dance crossing in the Shibuya area of Tokyo (Photo by Jon Aslund, via Flickr)

Three New York City council members **introduced legislation** last week calling on the DOT to study implementing pedestrian scrambles — also know as a "Barnes Dance" — at the city's 25 most dangerous intersections. The Barnes Dance design, named for traffic engineer Henry Barnes, who popularized them while serving as a street commissioner for cities including Denver, Baltimore and New York in the mid-20th century, halts all traffic for a period so pedestrians can cross in every direction, including diagonal.

New York City once had several such crossings, now dwindled down to one: the intersection where Broadway meets Vesey Street, Park Row and Ann Street in Lower Manhattan. Council Members Helen

Rosenthal, Mathieu Eugene and Ydanis Rodriguez want the DOT to study bringing them back. A press release about the proposed legislation cites a **2014 DOT report** that found 1 in 4 crashes that kill or injure pedestrians happen to people walking in the crosswalk with the signal. The Barnes Dance completely stops traffic, including turns, to allow pedestrians to walk unimpeded. Likewise, pedestrians are completely stopped while traffic is in motion.

Barnes Dance crossings were once more common traffic fare across the country, but since their mid-century heyday, traffic engineers have fought them on the basis they create too much congestion. As Eric Jaffe at CityLab details in this **brief history of the Barnes Dance**, this understanding was based on metrics that prioritize vehicle traffic over all other modes. Denver removed theirs in 2011, but other cities, including London and Toronto, have implemented them in recent years. D.C. brought the pedestrian scramble to Chinatown in the mid-2000s, at an intersection with more daily walkers than cars.

The NYC proposal, which would affect just the 25 most dangerous of the city's 47,000-plus intersections, is in line with the **city's Vision Zero policy**, which aims to eliminate traffic deaths by 2024. Street safety group Transportation Alternatives has pointed out that the current rate of traffic death reduction — 10 percent — **is too slow** to meet Mayor Bill de Blasio's goal by the proposed timeline, and has called for more interventions more quickly. Executive Director Paul Steely White is quoted in the city council press release:

"Because turning drivers who fail to yield continue to kill and seriously injure too many New Yorkers in crosswalks, we need to use every lifesaving tool at our disposal — tools like the Right of Way law, dedicated turn signals, pedestrian head-starts, and the crossing system known as the Barnes Dance. We commend Council Member Helen Rosenthal for showing Vision Zero leadership with this legislation, and we call on the DOT to implement this and other safety improvements around the city."

Jen Kinney is a freelance writer and documentary photographer. Her work has also appeared in Satellite Magazine, *High Country News online, and the* Anchorage Press. *See her work at jakinney.com.*

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